

REMARKS

This application has been reviewed in light of the Office Action dated November 14, 2008. Claims 1-7 are presented for examination, of which Claims 1 and 7 are in independent form. Claims 1-7 have been amended to define more clearly what Applicant regards as his invention. Favorable reconsideration is requested.

Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,417,019 (*Mueller*). Claim 7 was rejected under 35 U.S.C. § 102(b) as being anticipated by International Patent Application Publication No. WO 00/12226 (*Jones*). Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Mueller* in view of *Jones*; Claim 5 was rejected over *Mueller* in view of U.S. Patent Application Publication No. 2003/0181122 (*Collins, III*); and Claim 6 was rejected over *Mueller* in view of U.S. Patent No. 6,483,196 (*Wojnarowski*). Applicant submits that independent Claims 1 and 7, together with the claims dependent therefrom, are patentably distinct from the cited prior art for at least the following reasons.

Claim 1 is directed to a method for producing a white LED of predetermined color temperature. The method includes coating with a conversion layer at least one of a blue LED or a UV LED of a plurality of LEDs. The conversion layer absorbs at least one of blue light and UV light, and emits light of greater wavelength. The exact wavelength of the LED is determined before the coating step with a conversion layer. The color conversion layer comprises a color conversion agent and is applied over the LED in a quantity and concentration dependent upon the determined wavelength.

Among other notable features of Claim 1 is that the exact wavelength of the LED is determined before the coating step with a conversion layer comprising a color conversion agent. Also, the color conversion layer comprising the color conversion agent

is applied over the LED in a quantity and concentration dependent upon the determined wavelength.

The Office Action cites col. 7 lines 26-30 and col. 9, lines 60-65 of *Mueller*, as allegedly teaching or suggesting a conversion layer “characterized in that the exact wavelength of the LED is determined before the application of the color conversion agent and then the color conversion agent is applied over this LED in a quantity and/or concentration dependent upon the determined wavelength”. (Office Action, page 3, lines 1-4). However, those portions of *Mueller* appear to teach, at most, the relationship between the thickness and composition of phosphor films and the optical output of phosphor converted LED’s. These portions are silent about determining the exact wavelength of the LED before the application of the color conversion agent (i.e., the phosphor), and are also silent about applying the agent over the LED in a quantity and concentration depending on the determined wavelength.

Specifically, col. 6, line 59 to col 7, line 5, of *Mueller* states:

An appropriate composition can be determined experimentally by measuring the emission spectrum of phosphor converted LED 29 for a trial composition of phosphor particles 34 and then adjusting the trial composition as necessary.

In one embodiment, the composition of phosphor particles 34 is chosen to provide a phosphor converted LED 29 having an optical output with approximately a desired chromaticity. Then, after the composition is chosen, the concentration of phosphor particles 34 is adjusted to vary the fraction of nonabsorbed primary emission and thus fine-tune the chromaticity. The composition and concentration of phosphor particles 34 may be varied iteratively, for example, until the desired chromaticity is achieved.

Apparently, the tuning of the phosphor content is done after an initial amount of phosphor has been applied. However, nothing in *Mueller* discloses or suggests that the initial application of phosphor is made based on an exact determination of the wavelength of the LED it is applied to.

For at least these reasons, Claim 1 is believed to be allowable over *Mueller*.

Claim 7 is directed to a white LED light source, comprising a plurality of blue LEDs or UV LEDs. Above each of the LED's a conversion layer having a thickness is disposed. The thickness of the conversion layer is proportional to the exact wavelength of the LED concerned.

The Office Action did not give patentable weight to the language "the quantity of the conversion layer above each LED depends upon the exact wavelength of the LED concerned" formerly recited in Claim 7, because "the patentability of a product does not depend on the method of production." (Office Action, page 4, lines 7 and 8). Without conceding the propriety of that position, Claim 7 has now been amended as deemed appropriate to obviate the position.

A notable feature of Claim 7 is that the thickness of the conversion layer is proportional to the exact wavelength of the LED concerned.

Jones relates to a method for making a full color organic light emitting diode ("OLED") display using ink jet printing technology to pattern color conversion materials used in conjunction with OLEDs to produce a full color display.

However, nothing has been found in *Jones* that teaches or suggests "the thickness of the conversion layer is proportional to the exact wavelength of the LED concerned", as recited in Claim 7.

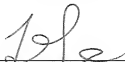
Accordingly, Claim 7 is believed to be allowable over *Jones*.

The other rejected claims in this application depend from Claims 1 and 7 discussed above and, therefore, are submitted to be patentable over *Mueller* and *Jones*, respectively, for at least the same reasons as are those respective independent claims. Because each dependent claim also is deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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